

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of the claims in the application:

Listing of Claims:

1. - 11. (Cancelled)

12. (Currently amended) A method of diagnosing susceptibility to obesity in a human ~~an individual~~ comprising the steps of

determining the expression pattern of a gene encoding add1/SREBP ~~or cytochrome c oxidase subunit VIIa~~ in the adipose tissue of the human individual;

comparing the expression pattern of the gene encoding add1/SREBP ~~the selected gene~~ of the human individual with that of a non-obese human individual; and

diagnosing the human individual as susceptible to obesity if the expression pattern of the gene encoding add1/SREBP ~~the selected gene~~ is decreased as compared to a that of the non-obese human individual.

13. -14. (Cancelled)

15. (Currently amended) A method of diagnosing susceptibility to obesity in a human ~~an individual~~ comprising the steps of

determining the expression pattern of a gene encoding add1/SREBP in combination with cytochrome c oxidase subunit VIIa and stearoyl-CoA desaturase in the adipose tissue of the human individual;

comparing the expression pattern of the gene encoding add1/SREBP in combination with cytochrome c oxidase subunit VIIa and stearoyl-CoA desaturase from the human individual with that of a non-obese human individual; and

diagnosing the human individual as susceptible to obesity if the expression of the said genes is decreased as compared to a the non-obese human individual.

16. (Currently Amended) A method of diagnosing susceptibility to obesity in a human ~~an individual~~ comprising the steps of
determining the expression pattern of a gene encoding add1/SREBP in combination with
cytochrome c oxidase subunit VIIa in the adipose tissue of the human ~~individual~~;
comparing the expression pattern of ~~a the~~ gene encoding add1/SREBP in combination
with cytochrome c oxidase subunit VIIa from the human ~~individual~~ with that of a non-obese
human ~~individual~~; and
diagnosing the human ~~individual~~ as susceptible to obesity if the expression of ~~the~~ said
genes is decreased as compared to a the non-obese human ~~individual~~.

17. (Cancelled)

18. (Currently amended) A method of diagnosing susceptibility to obesity in a human ~~an individual~~ comprising the steps of
determining the expression pattern of a gene encoding add1/SREBP in combination with
stearoyl-CoA desaturase in the adipose tissue of the human ~~individual~~;
comparing the expression pattern of ~~a the~~ gene encoding add1/SREBP in combination
with stearoyl-CoA desaturase from the human ~~individual~~ with that of a non-obese human
~~individual~~; and
diagnosing the human ~~individual~~ as susceptible to obesity if the expression of ~~the~~ said
genes is decreased as compared to a the non-obese human ~~individual~~.

19. (New) A method of assessing susceptibility to obesity in a human, the method
comprising the steps of:
determining the expression pattern of a gene encoding add1/SREBP, wherein the gene is
expressed in the adipose tissue of the human;
comparing the expression pattern of add1/SREBP of the human with that of a
non-obese human, wherein a decrease in the human's add1/SREBP expression pattern compared
to that of the non-obese human is indicative of susceptibility to obesity.